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# THE FARM INDEX

U.S. Department of Agriculture/ October 1971.





# Outlook

To recap: President Nixon announced in August a comprehensive economic program that seeks to reduce unemployment, minimize inflation, and restore our international competitiveness. The Administration, using authorizations already approved by Congress, placed ceilings on wages, rents, and prices of most products for a 90-day period, postponed social security tax increases, and ordered a reduction in Federal spending.

On the international front, the Administration suspended convertibility of the dollar into gold and placed a surcharge of 10 percent on U.S. imports. In addition, the President has requested Congress to repeal the 7-percent new-car excise tax, allow businessmen a 10-percent tax credit on new plants and equipment, and move up a scheduled higher personal income tax exemption from January 1973 to January 1972.

*So, what's all this have to do with agriculture? The Farm Index put that question to ERS economists. The following is their reply, beginning with the whys and wherefores of the new economic policy:*

The new economic package has evolved primarily because our economy was recovering too slowly from the 1969-1970 recession to provide jobs for new entrants into the labor force, and inflationary pressures were slow to ease despite a lagging economy. By allowing tax incentives, discouraging competing imports, and restraining wage and material costs, the Administration hopes to encourage investments, create new jobs, and increase purchasing power.

With more jobs and slowing prices, it is expected that consumers will regain confidence and step up their purchases. They have been saving a more than normal portion of their incomes in the past 2 years. This caution has tended to hold down our growth. A relatively smaller rate of savings by consumers from their after-tax incomes should bring increased domestic spending for food and other consumer goods.

The U.S. farmer will be affected in

varying degrees by several provisions of the new policy. Because he sells and buys products, the farmer contributes to, and is dependent upon, the general economy. He also competes with foreign products in the domestic and overseas markets.

The degree to which the new measures affect farm marketings, cash receipts, expenses, and income depends to a large extent on domestic and foreign response to the new package and on the nature of the post-freeze program. The farmer has enjoyed improved incomes as well as a more favorable outlook for the 1971/72 marketing year.

**The 90-day ceilings placed upon retail and wholesale prices exclude raw agricultural products** that generally retain the same physical form possessed when they left the farm gate. All other agricultural products are considered processed and subject to the freeze. This includes all products canned, frozen, slaughtered, milled or processed in some other way that changes the physical form. Packaging in itself is not considered a processing activity.

Examples of exempt products include live animals and poultry, shell eggs, raw milk, sheared or pulled wool, wheat, sugarcane and sugar beets and all fresh fruit and vegetables. Nonexempt products include slaughtered animals, dressed poultry, pasteurized milk, canned and frozen fruits and vegetables, soybean meal and oil, wool products, flour, and mixed feed.

Ceiling prices for commodities covered by the provisions of the freeze currently are governed by two base periods—the 30 days prior to August 14, 1971 and May 25, 1970. The Economic Stabilization Act of 1970, under which the President imposed the wage-price freeze, established the May 25, 1970 date as part of the general freeze guidelines. An individual commodity price may not exceed the highest price prevailing for a substantial volume of sales during these periods.

In addition, directives from the Cost of Living Council allow for seasonal variation in ceilings for those com-

modities exhibiting a definite seasonal pattern over each of the last three years. Butter, for example, is an agricultural commodity covered by the freeze. The highest wholesale price of butter at Chicago in the 30 days ending August 14, 1971 was 67.8 cents per pound. But the May 25, 1970 price of 69.8 cents per pound establishes a higher level for wholesale prices. Wholesale butter prices usually rise seasonally in the fall.

At the retail level, prices for food consumed at home usually reach their seasonal peak in July and August. Meats, fresh fish, grapefruit and carrots, are usually at their highs in August.

For processed products, any price advances at the farm level probably will be limited by farm-to-retail spreads and retail price ceilings. Wage and price ceilings in the World War II and Korean War periods generally fixed trade margins but allowed higher farm prices to pass through to higher prices at retail. During these earlier periods, however, there was excessive domestic and foreign demand and some scarcities—two elements which do not exist today.

Most farm product prices are presently declining seasonally and crop prices should continue to decline through harvest time. In general, farm product prices probably will cause few covered products to bump against their ceilings in the near future. Continued large livestock output and the prospects for record 1971 crops should prevent upward price pressures in the 90-day freeze period ending November 13, 1971.

**If restraints are extended into 1972, it will be necessary to consider seasonal and cyclical variations in supplies and prices.** Machinery set up by the Cost of Living Council now provides for amendments or exceptions to the wage and price ceilings—subject to a number of conditions for prices, wages, and rents that normally fluctuate in distinct seasonal patterns.

The new economic measures should improve an already brightening farm

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**income outlook.** Domestic consumer buying should increase because of greater price stability at the retail level and some limitation on foreign competing products. Foreign competitors could be hurt by the 10-percent surcharge on competitive imports not covered by quotas.

Also, foreign goods should become more expensive here and abroad—relative to U.S. goods—due to changing currency relationships in part due to suspended convertibility of the dollar into gold. The value of the dollar has already declined relative to the German Mark, the Japanese Yen and some other world currencies.

Imports not subject to duty or those under marketing quotas are excluded from the surcharge. Those excluded include such commodities as coffee, bananas, meats, sugar, some dairy products, certain types of fish and cotton textiles. For other imports subject to the surcharge, distributors may add the charge to the price.

**Farmers, aided by an increasing demand, larger marketings, and some moderation of rising costs, should enjoy better incomes in the second half of 1971 and early 1972.** Some price firming in the livestock sector should bolster receipts. Moreover, growing markets and a rebuilding of stocks of major crops are expected to absorb the larger crop output and tend to lessen overall pressure on prices.

Hog producers have indicated plans to cut output in the second half. Prices for livestock products, particularly pork, could strengthen materially and yet be below the price freeze ceilings. Milk producers, also, will receive larger incomes during the balance of the year because of expanded marketings.

Cash receipts from livestock marketings for 1971 as a whole will probably top last year's \$29.6 billion. Crop marketings will be heavily influenced by the outcome of 1971 crops, which now are very good, as well as domestic and world markets. On the basis of late summer prospects, including indications of record grain crops, re-

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## RURAL

## MARKETING

## CONSUMER

## FOREIGN

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Contents of this magazine may be reprinted without permission. They are based on research of the Economic Research Service and on studies done in cooperation with State agricultural experiment stations. Use of funds for printing this publication approved by Director of the Bureau of Budget, May 24, 1967. Subscription price: \$2 yearly (\$2.50 foreign). Order from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

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The Farm Index is published monthly by the Economic Research Service, U.S. Department of Agriculture. October 1971. Vol. X. No. 10



# Thar She Grozes!!



*There's a sperm oil shortage developing but USDA plant scientists believe they've sighted several crops that can partly substitute for this unique oil when our supply runs out sometime in '72.*

By AUDREY AMES COOK

*Contributing Editor*

Ecological conservation is not without its crises.

"Pipelines" that have been bringing multipurpose sperm whale oil into the United States since colonial days will be cut off at the end of this year, in accordance with the Endangered Species Conservation Act of 1969.

After December 1, there will be no more U.S. imports of oil, meat, and other products from sperm whales. And at the same time our small whaling industry will be outlawed.

At present there are no known adequate replacements for the 55 million pounds of sperm oil we have been using yearly in recent times. With present stocks, U.S. industry has only enough sperm oil left to meet its needs until about mid-1972.

The oil has unique properties—including very low polyunsaturation, stability under high temperatures and pressures, and a wide tolerance for varying temperatures. You'll find it, or a chemical modification of it, in automatic transmission fluids and many kinds of specialty lubricants; cosmetics and pharmaceuticals; shoe leather; textiles; and a multitude of diverse "inedible" products.

The sperm oil crisis prompts the question: "Can agriculture offer a crop that might yield a suitable substitute?"

It can, say USDA plant scientists. In fact, there are three—jojoba, *Limnanthes* (meadowfoam), and crambe—that could furnish raw material for the manufacture of fluids which might replace sperm oil in many of its most important uses. With more forewarning and all-out programs, a couple of these crops might by now be providing enough oilseed to ease the impending sperm oil shortage caused by the ban.



*Jojoba* (pronounced ho-ho-ba) is a large, long-lived shrub native to Arizona, California, and Mexico. Its nuts contain liquid wax esters quite similar to those in sperm oil. In fact, U.S. Patent 2450403 was issued in 1948 to protect a sulfurization process heightening this similarity.

But jojoba has no close relatives to cross breed for stock improvement, and it takes 5 years for cultivated plants to start producing seed. USDA has therefore not initiated any developmental research on it. Exploitation of jojoba in its wild-growing state is considered economically unfeasible.

*Limnanthes* (alias "meadowfoam") is suggested by USDA scientists as the most promising pinch hitter for sperm oil. Its seed oil, a mixture of triglycerides, can be converted chemically to wax esters comparable in quality to those of jojoba.

Test plantings in Alaska (Palmer), California (Chico), Maryland (Glenn Dale), and Oregon (Corvallis) indicate that meadowfoam has a lot going for it. With an expanded program, commercial production could probably be scaled up in about 3 years or maybe less.

The succulent plant itself is most often only about a foot high, rather sprawly, and seed heads are prone to shatter before harvest. However, certain species, notably of the *L. alba* group, have much better seed retention and are more erect than others.

*Limnanthes*, native to our Pacific coast, is made up of eight species of annuals especially abundant in northern California and southern Oregon. Because of their profuse flowering (usually white, but occasionally yellow and pink), they figure prominently in the spring wildflower display.

Species differ in growth habits, size, seed retention, and seed productivity, but they all yield almost identical seed oil.

The new crops program of the Agricultural Research Service has been experimenting with *Limnanthes*

since 1962. A wealth of genetic material for improvement through breeding is readily available. But projects have been small because of budgetary limitations and for lack of the incentive that the impending "emergency" now provides.

Meadowfoam's natural habitats are somewhat narrow. For example, it particularly thrives on banks of small streams that provide ample soil moisture for the growing season.

### Whale Tale

Most provisions of the Endangered Species Conservation Act of 1969 (Public Law 91-135) became effective in June 1970.

The U.S. Department of Interior placed eight whale species on the "U.S. List of Endangered Foreign Fish and Wildlife": finback, sei, and sperm—now the only whales seriously sought by commercial whalers—and the rarer bowhead, blue, humpback, right and gray.

Imports of oil, meat, and other products from these whale species were banned as of Dec. 2, 1970. Industry winced. It usually signs import contracts a year ahead for its annual sperm oil needs. And so, special government permits were issued through June 15, 1971, to allow entry through Dec. 1, 1971, of sperm oil contracted for prior to the ban.

North Pacific waters yield 89 percent of the world sperm whale catch—mostly by Japan and the USSR. The International Whaling Commission has set the 1972 North Pacific sperm whale limit at 10,841—20 percent less than this year's limit. Quotas in other waters are unchanged from the past 2 seasons. (2)

For highest seed yields in warm areas, meadowfoam should be fall planted. With harvest in May and early June, fields are freed early for rotational crops such as soybeans.

There appears to be no reason, however, why *Limnanthes* would not also do well in the upper Midwest as a spring-planted crop; it has already proved adaptable to Alaska.

Experimental seed yields of more than 1,500 pounds per acre indicate

that the crop can be economically commercialized with further breeding, cultural, and harvesting research. Diseases and insects have posed no problems to date.

Only one species of meadowfoam seed has been available commercially to horticulturists who prize the frothy blooms of the plant. But this fall, plantings will be scaled up to a few acres with selection and test plots at several locations.

At the same time, by early next year, ARS hopes to have some results from tests of *Limnanthes* oil actually used as a high pressure lubricant after its chemical transformation into a facsimile of refined sperm oil.

*Crambe* (cram-be) is another new oilseed crop that holds promise. Like *Limnanthes*, crambe oil can be converted to wax esters, but it would probably require an extra processing polyunsaturation.

Productionwise, crambe is actually a step ahead of *Limnanthes* at present. Two varieties have been released. Crambe has been grown commercially or on a multi-acre basis in California, Illinois, Indiana, Louisiana, Montana, Nebraska, Oregon, Texas, and Washington. Some people call the plant Abyssinian mustard.

Like meadowfoam, crambe flowers are white but the plants are taller, averaging 2 to 3 feet. Cultivation of the two new crops is similar, as both can be planted and harvested with small grain equipment.

Field seed yields of over 2,000 pounds per acre and over 4,000 from experimental plots have been achieved. Approximately 100,000 pounds of seed have been raised this year and will be available for future scaling-up of production. (Canada, incidentally, harvested about 6,000 acres of crambe last year.)

With the headstart it has, crambe could probably be filling the sperm oil void within another 2 years—quantitywise at least.

However, because of the extra processing step involved and other technicalities involving the chemical conversion, crambe might cost more to process than *Limnanthes*.



After minor modification, soybean crushing equipment could be used to prepare oil from crambe and *Limnanthes* seed.

Arrangements are under way by the Vincennes University Foundation to build a special crambe processing plant, the first in the Nation. This plant will be leased and operated by Crambe, Incorporated—a group of southern Indiana farmers, seed elevator owners, and other interested parties. Use is also being made of the expertise available at Purdue University in this project.

In any case, no product can claim being called a sperm oil replacement until it has proved itself in actual performance.

Probably no one product will replace refined (winterized) sperm oil in all its uses. But USDA chemists think that agriculture has a good chance of providing a *range* of industrial crops to fill the bill. (1)

## Arizona's Larger Feedlots Rated the More Profitable

It's not hard to tell in a few words the main story of Arizona's important cattle feeding industry—feedlots are getting fewer and larger.

As Americans have stepped up their beef consumption, the industry has boomed, and Arizona has become one of the top 10 States in cattle feeding. From 1950 to 1970, Arizona had a sevenfold increase in the number of cattle on feed.

Unlike the Corn Belt, where cattle are traditionally fed on farms, Arizona has concentrated its feeding in large feedlots.

Last year, 14 feedlots—each with a capacity of more than 16,000 head—marketed 70 percent of that State's fed cattle. In all, there were 61 feedlots in 1970, and they marketed 860,000 cattle. As recently as 1962 there were 189 feedlots, though they marketed far fewer cattle—568,000.

The trend toward larger feedlots in Arizona is expected to continue,

principally because of the economies of size. Such costs as labor and land and buildings go down markedly on a per unit basis as the number of cattle fed increases.

An Arizona study indicates variable costs (excluding feed) decline from \$24.07 per head in feedlots of up to 5,000 capacity, to \$16.10 a head in those with a capacity of 20,000. Likewise, fixed costs decline from \$11.53 per head to \$6.52 in the larger feedlots. Total annual fixed and variable costs of owning and operating the feedlot, exclusive of feed, amounted to \$35.60 per head for a 5,000-head unit contrasted with \$22.62 for the 20,000-head unit.

This is one reason the number of feedlots with a capacity of fewer than 1,000 head dwindled from 95 in 1962 to 9 by 1968. Those with a capacity of fewer than 4,000 head also decreased in number, as well as in the volume of cattle handled. Only those feedlots with a capacity of more than 16,000 head marketed more cattle in 1968 than in 1962.

One of the most common forms of cattle feeding in the State is custom feeding. The customer furnishes cattle for the feedlot and pays a charge for each ton of feed consumed plus veterinary fees. The feedlot is responsible for feeding the cattle and, generally, for providing marketing service as well.

Cattle and calf sales are playing an increasingly important role in the agricultural economy in the State. In 1969, they made up nearly half the cash receipts from agriculture. (3)

## Large-Scale Farmers May Seek New Credit Sources

Outstanding farm debt—now \$60 billion—has increased five times since 1950. It doubled between 1960 and 1970, and is expected to double again by 1980.

If it does, an additional \$60 billion is going to be needed in the next 10 years for farm debt.

Where will it come from?

For the small farmer, there probably won't be much change. He'll get it from present regular lenders.

But for the very large farmer, some major changes are anticipated, although no major shortage of money is likely.

In the next 10 to 20 years, the large farmer is expected to get credit increasingly from (1) incorporating and selling stock; (2) selling limited partnerships where the partner is liable only up to the amount of his investment; (3) working with marketing cooperatives that furnish production funds; and (4) using equity financing by banks and insurance companies whereby they become part-owners of the farm that they operate.

Increased use of these nontraditional sources of credit will occur not only because farms are growing larger and using more credit, but also because traditional sources have limitations such as size of loan they can offer.

Commercial banks have traditionally been, and still are, the largest institutional source of non-real es-

### INSTITUTIONAL LENDING IN AGRICULTURE

Type of Lender	Real Estate Debt			Non-real Estate Debt		
	January 1			June 30		
	1950	1960	1970	1950	1960	1970
	Percent of Total					
All operating banks	29	23	24	72	70	64
Production credit associations	—	—	—	15	22	30
Federal Intermediate Credit Banks	—	—	—	2	2	1
Farmers Home Administration	6	6	3	11	6	5
Federal land banks	28	32	39	—	—	—
Insurance companies	37	39	34	—	—	—



tate credit in agriculture.

But banks' share of non-real estate debt held by institutions dipped from 72 percent in 1950 to 64 percent by 1970. Meanwhile, the share held by production credit associations owned by farmers doubled to 30 percent.

One of the reasons is that legal lending limits don't permit the small banks in many rural areas to make large enough loans to meet the needs of large-scale farmers. So, big farm borrowers have turned to the production credit associations and regional city banks.

Insurance companies, long an important source of funds to finance farm real estate, accounted for 17 percent of the total farm mortgage recordings in 1960—and only 4 percent in 1970. This was due in part to tight money in 1969–70.

Low interest rate ceilings in several States discouraged insurance companies from investing in farm mortgages when they could get a higher rate elsewhere. Another factor was that companies had less money to invest in 1970, because of heavy borrowings by policyholders at low interest rates.

Insurance companies in the second half of 1959 put 2 percent of their new investments in farm mortgage loans; 6 percent in policy loans; and 57 percent in bonds. But in the third quarter of 1969, this had changed to .6 (six-tenths) percent for farm mortgages, 10 percent for policy loans, and 68 percent for bonds. (4)

## Volume Down, Costs Up For Most Texas Ginners

Average volumes of cotton handled by West Texas ginners went down again in the 1969–70 harvest season. The per-bale operating costs went up, with this exception: those cotton ginners who had an output capacity of at least 21 bales an hour. Their per-bale costs were 61 cents lower than in the previous season. This was largely because volume handled increased by 17 percent.

Taking all gins sampled in this survey—numbering 300 plus—total

## THE FARMERS' SHARE

In every year of the 1960's, Americans upped their purchases of food produced on U.S. farms.

Expenditures in 1970 were a record \$102 billion—almost 7 percent more than a year earlier. The farmers' share?

It worked out to 33¢ for every dollar spent. That's roughly a cent less than in '69. The farmers' share has generally trended down over the years.

There are various ways of expressing the farmers' share of food spending. Four of these are shown in the pie charts below. In every case, farmers got a smaller slice in 1970 than in 1950. In 1950, the shares were: 47¢ for market basket food, 41¢ for all farm food, 39¢ for all food, and 9¢ per dollar of con-

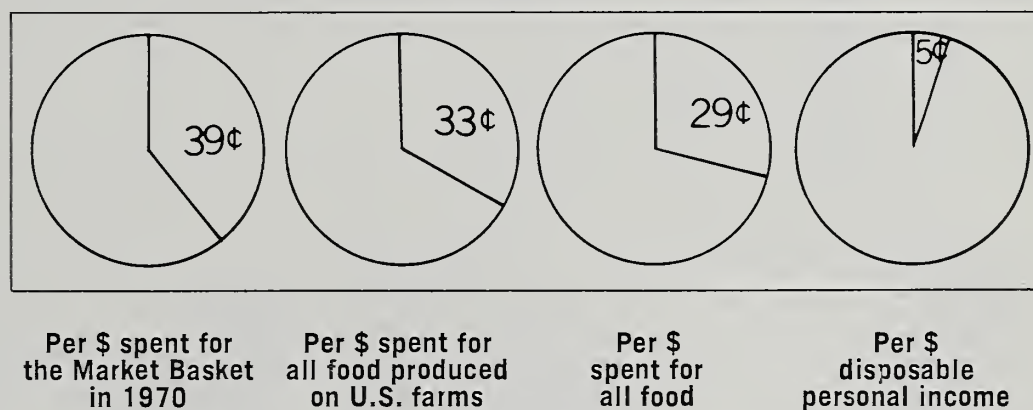
sumer disposable income.

The "market basket" is the average retail value of U.S. farm produced food bought by urban wage earner and clerical worker families and single workers living alone. It is primarily food purchased at the grocery store (excluding alcoholic beverages) and prepared at home.

"All food produced on U.S. farms" is the market basket plus the value of meals eaten in restaurants and other away-from-home eating places. Due to the high cost of preparing these foods, the farmers' share is naturally smaller than it is for the market basket alone.

The "all food" share is smaller still, since it includes imported food and fishery products.

"Per \$ of disposable income" is the farm value divided by consumers' total income after taxes. (7)



operating costs increased by an average of \$2.52 per bale. The increased cost brought total costs per ginning operation to \$26.89 a bale.

Perhaps the greatest potential for cost reduction in ginning, according to ERS, is in the use of labor. This item alone accounted for 20 percent or more of the total variable ginning cost in 1969/70. Rates paid ginners and gin hands are set by law or else by competition and are difficult to reduce. Therefore, a cost saving in labor would have to stem from a reduction in crew size, more efficient use of individual employees, or both.

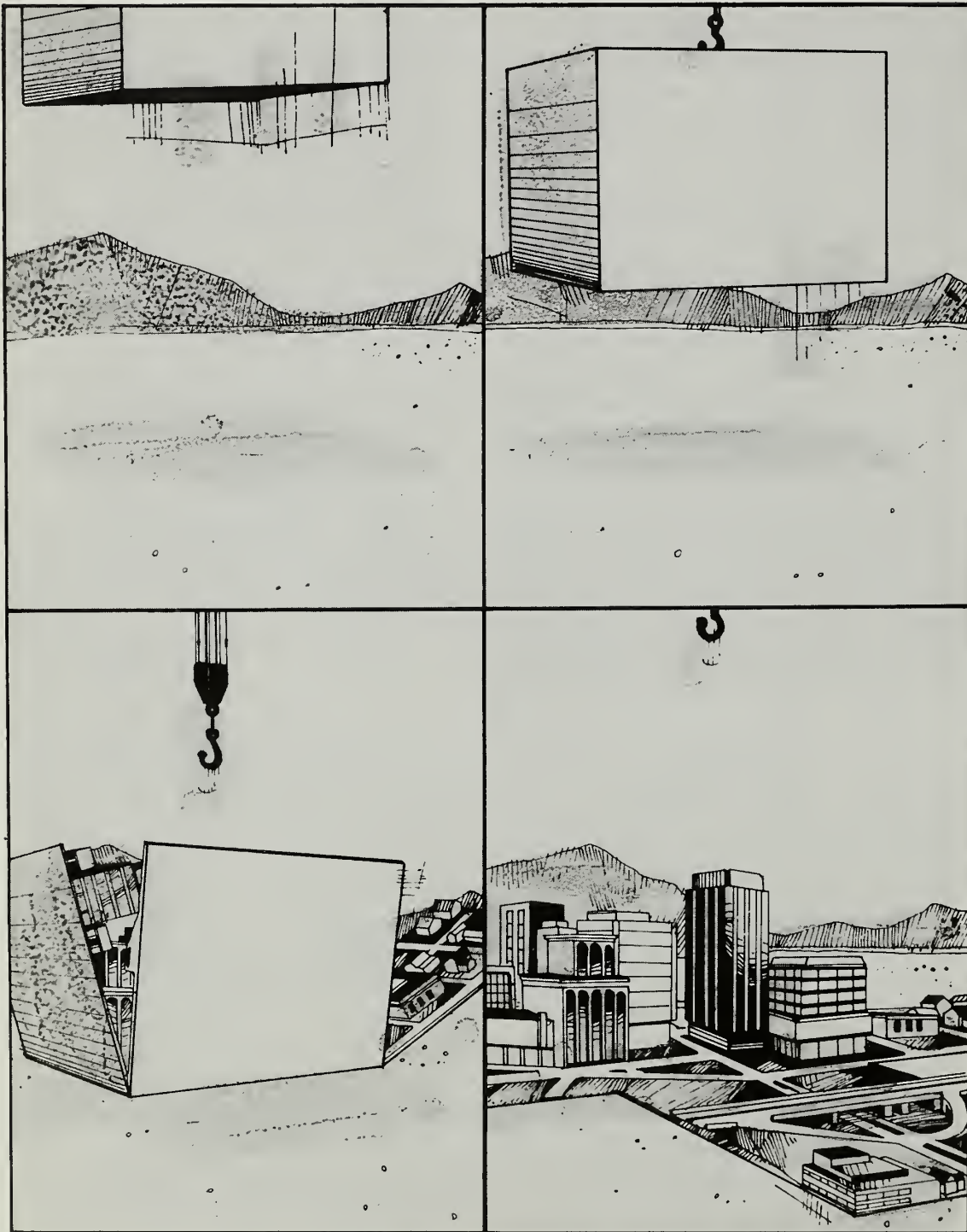
Suggested crew size, based on findings in the development of model

gins, range from 6 to 14 men for the 6- to 24-bale model gins, respectively. In most cases, these specifications are exceeded in actual practice. Also, a full crew is frequently kept on duty when a partial crew might be adequate.

When seed cotton receipts at the gin yard are slow and sporadic, particularly at the beginning and end of the season, only a skeleton crew could be used until sufficient volume accumulates to assure continuous operation of the gin plant for at least one full shift. These findings emphasize the need for a concerted effort by all gin owners and operators to carefully analyze their operations in a move to reduce costs. (19)



# port fabs: new concept of a city



*Fighting the outflow of people from country to urban centers, a research team places a hypothetical city in rural Kansas and guides it through growth.*

Want to build a city?

A team of agricultural economists has done just that, albeit on paper, to determine the economic impact a new city would have on a rural area.

They've named the fabricated city

Port Fabs, in the Arkansas River Basin of southeastern Kansas.

Port Fabs is something new in cities. It's placed where new cities are needed—in this case, the Great Plains—and where transportation facilities already exist.

Most States in the great heartland of the country have been losing people for decades, while population is still growing in 12 major urban regions where there's already heavy

settlement of residents.

Of all regions, however, the Great Plains has had the highest rate of off-farm migration. From 1957 to 1963, more than 50 percent of those under 35 left the farm. About 20 percent moved 50–150 miles, and more than 13 percent moved more than 500 miles. They left the farm, the State, and even the region for greater opportunities elsewhere.

Who can stop the depopulation of rural areas?

Some observers believe the commitment has to come from the grassroots level. Chambers of commerce, civic groups, bankers, mayors, school superintendents, can all play a big role in attracting people and industry to the community.

Business and industry can help, too, by decentralizing some of their operations away from major urban regions and by starting new activities in nonmetropolitan settings.

But how do you "create" a city where there is not one and make it prosper? Port Fabs was created to show *one way* a rural growth center could be put together.

The economists who conceived Port Fabs selected for a site the edge of a small city (either Winfield, Arkansas City, or Coffeyville) that offered established (but underutilized) railroads, highways, and communication networks. The site is also within easy traveling distance from the large urban centers of Wichita, Kansas City, and Oklahoma City.

Next, the economists selected an industrial base on the premise that to prosper, a city needs expanding industries and at least one fast-growing industry. A modular home construction plant employing 1,000 workers fit the fast-growing slot. Other additional industries were selected to provide a spectrum of employment opportunities: malt beverages, synthetic materials and plastic products, motor vehicles and farm machinery, electrical equipment and instruments, apparel, containers, and recreational equipment.

They didn't have to plan additional



recreation facilities—new sites near water are already in use.

The economists estimate planning and development of Port Fabs would take nearly 10 years. The new city government could apply for Federal grants and loans, and industries could be offered such incentives as direct payments, tax credits and tax deferrals over the 10-year development period, and low interest loans.

State governments could likewise provide inducements such as State industrial bonds and tax incentives.

By 1980, it's projected that the new industries would directly provide full-time work for 5,800 persons. Including indirect employment, the industries would generate nearly 18,000 jobs in the 54-county river basin area.

Of that total, about 15,000 would actually be in the new city. An additional 700 or so State and Federal jobs would be created, assuming a ratio of 5 State and Federal employees to each 100 nongovernmental employees.

Thus, an estimated 15,700 persons would be employed in Port Fabs by 1980. With an average employee family size of 2.75 persons, the population would reach some 43,000 by 1980. It would go to 75,000 by 1990 and 100,000 by the year 2000.

By 1980, personal income would increase to nearly \$170 million, and output from the 18,000 new employees would be nearly \$875 million.

Without Port Fabs, the 54-county area stands to lose 138,000 persons by the year 2000 due to net outmigration. Current trends indicate those leaving would be primarily the young labor force seeking employment in large metropolitan areas.

Few of these young people return—simply because job opportunities aren't available that require skills acquired in high school or college.

Not only do the rural areas lose earning power and future tax base, but in essence they're subsidizing talent to wealthier urbanized States.

Wherever it is built, Port Fabs will have in common with other growing cities problems such as planning

land use, financing and providing schools and other community services, and maintaining environmental quality. While two aspects of planning a new city covered here—its potential impact on employment and income—are crucial, other factors must be considered, such as the stability of the new and expanded industries, the impact on existing production capacity in other regions, the availability of raw materials, and the source and previous employment of the new work force.

Port Fabs exists only on paper, and even there it is completely hypothetical; but it is a place to start when evaluating proposals for new cities to be located in rural America. (8)

## Forest Tax Laws Grafted To Land Use Goals

A new dimension has been added to the perennial problem of taxing forest land and timber.

Heightened concern over population pressures and environmental deterioration has sparked demands for rural land use planning and for controls to preserve our forests, farmland, and other open spaces.

Meantime, local governments have lifted property tax rates in order to acquire needed revenues. In some cases, high tax burdens are an incentive for woodland owners to sell or strip their property, or to convert it to a higher value use that may not be in the best public interest.

Progress toward wise rural land use lies in better coordination of property tax policy with long-range land use planning.

One step in this direction is "present use" assessment of forest property. This approach assesses woodland at its value in *that* use, as opposed to its market value if sold for some potential use, such as a site for shopping plazas or housing developments. This form of valuation has long been practiced in Europe, and offers promise for the future.

Currently, more than a dozen States use this method to tax forest land. In this connection, policymakers have had to ask themselves some basic questions.

*What forest lands should be eligible for present use assessment?* Different criteria have been developed. In Washington, for example, tracts of 20 or more acres devoted primarily to the growth and harvest of forest crops are eligible. Hawaii's laws require the forest tract to be located in a State-zoned conservation district, and dedicated to a conservation use for a minimum of 10 years.

*Should present use assessment be optional or mandatory?* Most of the States chose the former. As land use objectives and property tax laws become more closely interwoven, however, more States may opt to make present use assessment mandatory.

*How are forest land values to be determined for tax purposes?* Several States established valuation advisory agencies to determine values or to guide assessing officers. Other States have not adopted well-defined assessment standards.

Florida has perhaps developed the most comprehensive standards, as contained in the Woodland Assessment Guides. These are recommended values per acre by site-class and region for four types of pine woodland and hardwood land. The estimated annual per acre income from forest products—after deduction of an expense allowance—is capitalized at 7 percent.

*Should additional (roll-back) taxes be levied if the forest land changes use?* Half the States provide that landowners who change their tracts to nonforest use must pay a roll-back or recapture tax. This is calculated as the difference between what they paid under present use assessment, and what they would have paid had their land been assessed at its market value. In a few cases, interest and penalties are charged, in addition to the roll-back tax. (9)



## Small Farmers Often Head Poorest Rural Households

The small farmer is often an impoverished farmer.

That was found to be the case in the East North Central States, where ERS surveyed households in open-country areas.

The ERS study—latest in a series on the extent and type of rural poverty—focuses on parts of Ohio, Indiana, Illinois, Michigan, and Wisconsin.

The East North Central region is considered to be relatively affluent. The per capita income averaged about a tenth higher than the U.S. average in 1966—the year prior to the household survey.

Nevertheless, about 190,000 farm and nonfarm households, or 11 percent of the 1.9 million households in the open-country region, were found to be poor. Another 205,000 were on the brink of poverty.

Poverty level was determined by size of household. No household in this survey was judged to be poor if it had an income over \$5,000. The income actually received by the poor households averaged much less—around \$1,200 in 1966.

Excluding the larger farmers with gross sales of \$10,000 or more, only 11.5 percent of all household heads reported self-employment on farms as their sole or major source of earnings. Yet these small farmers made up 44 percent of the heads of deprived households in the 45–64 age bracket.

The study revealed that among the farmers who grossed less than \$10,000, over 70 percent used the farm to supplement their nonfarm income. Among this group only 11 percent were poor. When the farm was the sole or major source of earnings, one-quarter of the households were poor.

And taking all age groups, at least a fourth of the poor households relied on farming for most or all of their earnings.

Not all these farms reported a profit. In fact, a fairly high propor-

tion—44 percent—of the impoverished households who operated farms said they lost money.

Possible reasons for these losses range from bad management and vagaries of weather to methods in reporting income for tax purposes (bookkeeping losses showed up when receipts were deferred to 1967 and expenses were paid in 1966).

Still another explanation has to do with a preference for farm living. Nearly 2 percent of all household heads volunteered the information that they farmed for enjoyment. Of this group, over half had farm losses.

The survey team concluded that for many household heads who are self-employed in farming, this line of work may be the best or only activity possible—given their individual potentials and employment opportunities in the area—particularly if the wife has a nonfarm job.

Some, however, could be retrained for other types of employment. This particularly applies to the under-45 age group.

Persons in the 45–64 age group are less easily retrained. But through counseling, they could be helped to find work that can use their agricultural skills, such as businesses that service the large commercial farms.

The survey also found that some of the poor farmers would rent out their land if they had the opportunity. This suggests the advisability of setting up a clearinghouse for lessors and lessees. (11)

## South's Black Population Drops in Nonmetro Areas

By comparison to other parts of the South, the rural and small city areas had a high growth rate in non-agricultural jobs during the 1960's. Even so, nearly a fourth of the total nonmetro black population moved out of the South in the 10-year period.

Were these new jobs inaccessible to black people? Did the blacks lack the necessary qualifications? Or, did those who left simply regard their

former homes as undesirable communities to live in?

All these factors may have contributed to the net decline in numbers of blacks living in nonmetro areas.

All told, the South lost 1.2 million blacks in 1960–69. It gained 1.8 million whites.

Most, but not all, of the black outmigration was offset by births. By 1970, the South's nonmetro black population totaled 5.5 million, compared with 5.8 million 10 years earlier.

Areas with the heaviest outmigration of blacks were the Mississippi Delta, the Black Belt of Alabama, Southwestern Georgia, and other scattered parts of the Coastal Plains. A majority of counties in these areas had a net outmigration of more than 33 percent in the 1960's. There was also a substantial decline in total populations. And from 60–70 percent of the youth who reached their 20th birthday during this decade left these counties. (12)

## Farm Family Income May Reach \$15,000 by 1980

The number of farms is projected to drop to 2 million farms by 1980, but the number of families who rely primarily on the farm for their income will be much smaller.

Such farm families could number only 830,000, compared with some 1.5 million in 1970. And many would have substantial off-farm income, according to one ERS projection.

If farm family income from all sources continues to increase at recent rates, the average farm family will be earning twice as much by 1980—\$15,000.

Farm family income has been increasing at a faster rate than that of all families in the U.S. Since 1954, farm family income from both farm and nonfarm sources rose 6.4 percent a year on the average. Growth in income for all families averaged 4.4 percent. The projection is based on Current Population Survey data. (13)



## Farmland's Potential Uses Influence Sales Value

The value of an acre of farmland is greatly affected by the land's potential for nonfarm uses.

Note these statistics collected from the March 1971 survey of farm real estate reporters—

- Farmland that had a potential for industrial development averaged \$931 per acre in sales value. This was more than four times the value of an acre sold exclusively for farming, which averaged \$215.

- Farmland that could be put to

commercial use averaged \$505—twice the value of land bought for farming.

- Third highest in value, after industrial development and commercial uses, was land with a potential for rural residences. Its value averaged \$327.

- Fourth in value was land that might be used for subdivision—averaging \$300.

There were, however, wide variations among the country's 10 geographic regions. The variations reflect differences in economic conditions and intensity of demand for

farmland.

For example, in the Corn Belt farmland with potential for industrial development averaged \$1,338 per acre. In the Appalachian region, farmland for industrial uses was valued at only \$321.

The value of farmland varies not only by potential use and geographic location, but also by acre-size class. The smaller the tract, the higher the market price per acre. Farmland bought for industrial use in the 10-49 acre class averaged \$4,638 per acre. Similar land in the 1,000-plus acre class bought \$1,242. (14)

### FARM INCOME STATISTICS:

Some of the most quoted—and misquoted—of all statistics are the U.S. Department of Agriculture's national farm income figures. USDA publishes regularly a comprehensive set of income estimates relating to agriculture. The major series, along with other important series from which they are derived, have been developed over more than a third of a century. Each series, whether major or minor, is designed for a specific purpose. For accurate results it should be used only in the way it was designed to be used. Unselective use is a common cause of error. Many figures may be vaguely reported as farm income—cash receipts, realized gross income, total net income, for example. Yet there are billions of dollars worth of difference between them. USDA's estimates center around two major concepts of farm income: One views agriculture as a business or an industry and measures income from the job of farming. The other views the people who live on farms and measures their income from both farm and nonfarm sources. The major series in each classification and their relationship to other series are shown here (5)

### INCOME FROM FARMING, 1970

Billion Dollars

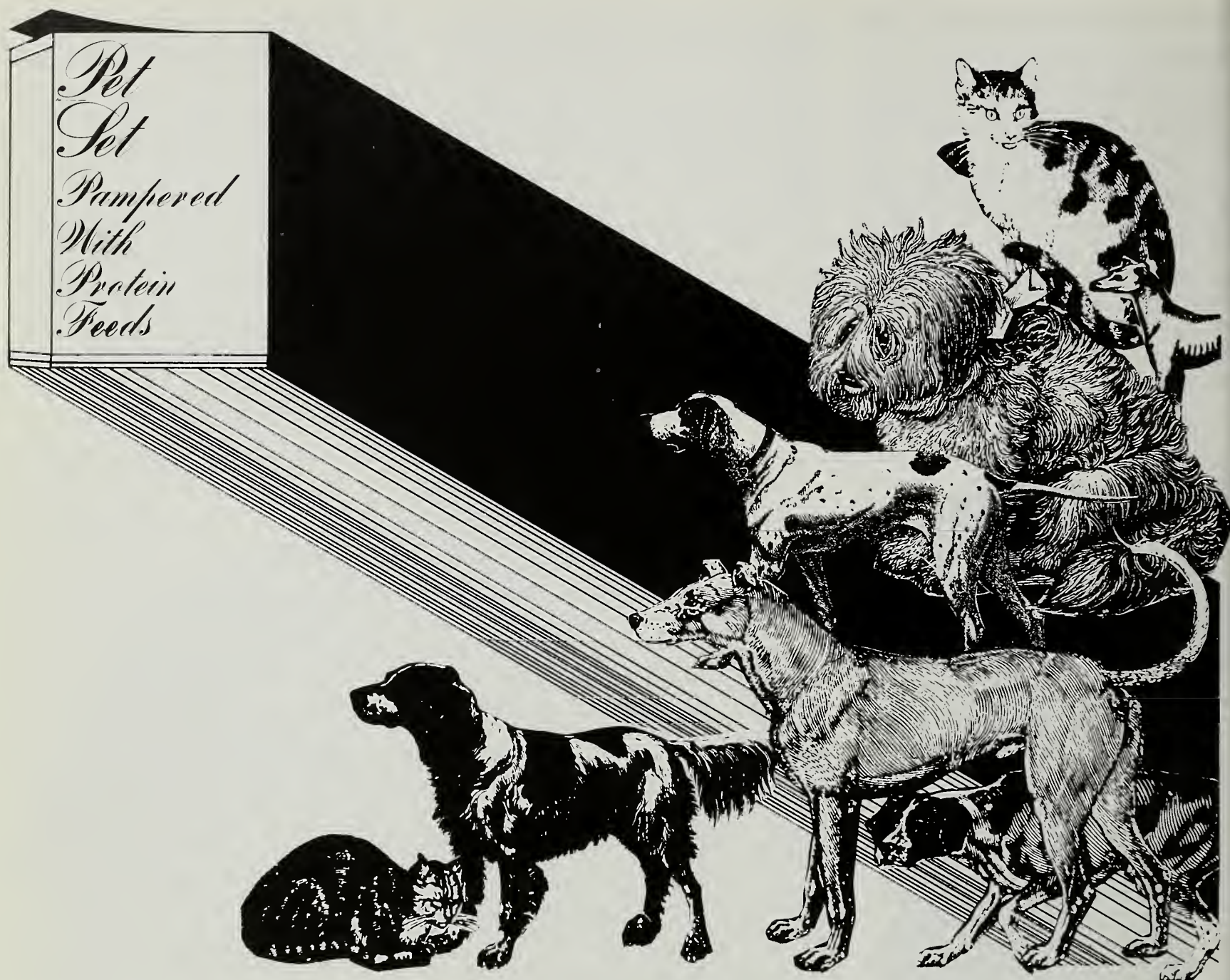
<b>CASH RECEIPTS FROM FARM MARKETING</b> Money received from sales of about 150 farm products.	49.2
<b>GOVERNMENT PAYMENTS TO FARMERS</b> Payments to farmers under farm programs. Net price support loans are included with cash receipts above.	3.7
<b>NONMONEY INCOME</b> Includes home consumption of farm products and imputed rental value of farm dwellings.	3.6
<b>REALIZED GROSS INCOME FROM FARMING</b> Income from farming available for all purposes—farm operation, family living and investment.	56.6
<b>PRODUCTION EXPENSES</b> All cash spent to operate the farm business, plus certain non-cash items. Includes depreciation of equipment and other capital items rather than current purchases of these items.	40.9
<b>REALIZED NET INCOME</b> USDA's standard net income figure. The word "realized" indicates that the figure has not been adjusted for changes in inventories. Represents return to operator for his labor and management, the labor of his family and his invested capital.	15.7
<b>NET CHANGE IN INVENTORIES</b> Difference this year from last in quantities of each crop and livestock product held on farms, valued at average prices received by farmers during the year just ended.	0.2
<b>TOTAL NET INCOME</b> This figure is a component of national income figures of the Department of Commerce. It is published in the national income reports of that Department as "net income of farm proprietors."	15.9

### PERSONAL INCOME OF FARM POPULATION, 1970

Billion Dollars

<b>PERSONAL INCOME FROM FARM SOURCES:</b>	
<b>TOTAL NET INCOME FROM FARMING OF FARM RESIDENT OPERATORS</b> This is the total net income of farm operators from farming minus the net income received by farm operators who do not live on farms.	13.6
<b>FARM WAGES OF LABORERS LIVING ON FARMS</b> Wages and other labor income for farmwork paid by farm operators out of their gross income to workers living on farms. These wages are a production expense to farm operators, but a source of income to the farm population.	0.9
<b>CONTRIBUTIONS OF FARM RESIDENT OPERATORS AND WORKERS TO SOCIAL INSURANCE</b>	0.3
<b>TOTAL PERSONAL INCOME OF FARM POPULATION FROM FARM SOURCES</b>	14.2
<b>PERSONAL INCOME FROM NONFARM SOURCES:</b> Includes wages, salaries, and other labor income of farm residents from nonfarm jobs, rents and royalties, dividends, and interest, net income from nonfarm business and professions, and transfer payments, such as unemployment compensation and social security.	13.3
<b>TOTAL PERSONAL INCOME OF FARM POPULATION FROM ALL SOURCES</b>	27.5





*The wide assortment of pet foods marketed today are packed with protein by a \$1 billion-a-year industry that draws heavily on our stocks of high-protein feeds.*

Time was when the typical menu for a household pet consisted of scraps from the family dinner table. Now, commercially prepared rations are the featured entree.

The pet food industry has emerged as a \$1 billion-a-year business, turning out an estimated 4 million-plus tons of food for the Nation's dogs, cats, and other less prosaic pets.

It is estimated that 30 to 40 percent of the ingredients mixed in pet foods are derived from stocks of

high-protein feeds for livestock and poultry. Put another way: 5 to 8 percent of total domestic high-protein feeds are being canned and packaged by the pet food industry.

By adding to the demand for proteins, the pet set has also helped to partially offset the share of the natural protein market lost to urea—a synthetic protein often substituted for soybean meal in feeds for ruminant animals.

Use of high-protein feeds by all livestock climbed nearly 35 percent from 1958 to 1969. Meantime, pet food consumption almost doubled.

The switch from table scraps to rations expressly made for the pet set is reflected in data from the Cen-

sus of Manufacturers. The last Census in 1967 reported that 2.7 million tons of dog and cat foods had been shipped from processing plants during the year. This was 22 percent more than recorded in the 1963 Census, and close to 70 percent over 1958 shipments.

Output of dog and cat foods in 1967 was valued at \$700 million—more than twice the 1958 figure. By 1969, the value had jumped to \$970 million.

The Census of Manufacturers also lists production of specialty feeds. This group includes feeds for fur bearing and laboratory animals, birds, and rabbits. Over 700,000 tons of special feeds were shipped from



processing plants in 1967, pushing total shipments of pet foods and specialty feeds for that year to nearly 3½ million tons.

Accelerated pet food production reported by the Census closely parallels sales data from individual States. Over the past decade, 13 States have consistently included pet foods in current sales reports of formula feeds and feed ingredients. Sales rose by nearly 70 percent from 1958 to 1967. From 1967 to 1969, pet food sales were up another 20 percent.

In addition to changes in feeding practices, the heightened demand for pet foods mirrors the expanding pet population. There are an estimated 26 million family-owned dogs in the U.S.; cats number 21 million.

Owners of this vast menagerie have their pick from over 100 different types and forms of processed pet foods displayed in average supermarkets. Four-fifths of the items are new foods introduced after 1958.

The bulk of the pet food market caters to the country's canines. In 1967, dog foods comprised close to 75 percent of total pet food output. Only 10 percent was earmarked for cats. The remainder included specialty feeds and cat and dog foods not specified by type.

The foods are marketed in three major forms: dry (meal, pellets, and biscuits), canned, and moist and semi-moist. Dry pet foods are drawn largely from conventional supplies of feed ingredients, including corn meal or ground corn, meat meal, soybean meal, wheat byproducts, and animal fats.

Typical dry pet foods are 23 to 25 percent protein and 10 to 12 percent moisture.

Canned cat and dog foods are much higher in animal and fish proteins, although some contain many of the products packaged in dry foods. Many canned items are largely or entirely meat—chicken or beef, horse meat, fish and fishmeal. Moisture content averages 70 to 80 percent; protein content, 10 to 12 percent.

Moist packaged foods are usually

high in meat and meat byproducts, but also contain soybean meal and animal fats. The protein content is roughly 20 percent—higher than in dry foods, but less than in canned products—after adjusting for moisture content. (15)

## Cattle Feeders Compete On Regional Basis

The rapid expansion of the cattle feeding industry has intensified competition among production areas for resources and markets for fed beef.

Regions holding a competitive edge, a Texas study indicates, are those that can adjust to the industry's changing demands and developments, and that can realize savings through having:

- Economies of size in feeding operations, which enable production on a least-cost basis;
- A location in or near major surplus grain producing areas;
- Readily available supplies of feeder cattle; and
- Adequate slaughter facilities close at hand.

By 1975, the strongest competitors are expected to be located in a concentrated feeding belt extending from the Texas-Oklahoma Panhandle and New Mexico area, through Kansas and Nebraska, the Western Corn Belt, parts of the Eastern Corn Belt, and down into Kentucky and Tennessee.

The Texas-Oklahoma Panhandle and Kansas-Nebraska areas will probably see the most rapid expansion in feedlot activity. These regions share an advantage in economies of size, and in the availability of feed grains and feeder cattle.

Though the Corn Belt has a surplus of feed grains and an abundant supply of feeder calves, it also has many fairly small feeding operations. This is not to say cattle feeding in the Corn Belt will buckle under the competition from the big feedlot firms in nearby Kansas and Nebraska. But those Corn Belt feeders who do not apply cost saving techniques to their operations will

find it increasingly difficult to compete with regions where large commercial feedlots predominate.

Regions that are far removed from sources of feed grains or feeder cattle will likewise be at a disadvantage, even though they may enjoy economies of size or nearby market outlets. Prime examples are the Far West and the Northeast.

In the South, many cattle feeders face feed grain deficits and diseconomies in feedlot operations. In Kentucky and Tennessee, however, lack of economies of size is largely offset by locational advantages. Feed grains are readily available from the Corn Belt. Feeder cattle may be obtained from nearby Southeastern States. And fed beef can find outlets throughout the South, which for the most part is deficit in beef production. (16)

## Egg Production Paced By Rate of Integration

By the end of the 1960's, integration of the U.S. market egg industry increased nearly threefold over 1955 levels. Integration increased in all regions, but not at the same pace.

Integration accelerated most rapidly in the West, South Central, and South Atlantic regions. Meantime, each area substantially expanded its share of total U.S. egg output, as the chart on p. 14 indicates.

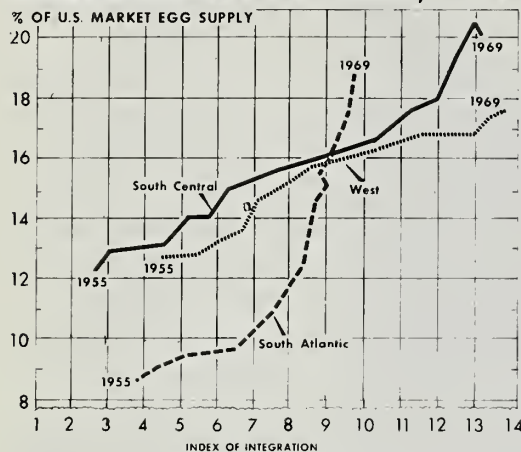
Conversely, integration lagged behind the average rate of development in the East North Central, West North Central, and North Atlantic regions. Each region's share of total egg production declined. Integration expanded the least in the West North Central Region. Its share of total U.S. output plummeted from close to 30 percent in the mid-1950's to less than 15 percent in 1969.

The index of integration shown in the chart is a combined measure of three types of integration: owner-integration, contract production, and cooperative marketing.

Owner-integrated firms are vertically integrated operations that own



**INCREASING EGG PRODUCTION AND CHANGES IN INTEGRATION BY REGIONS, 1955-69**



or control two or more stages of production, processing, or marketing. Development of owner-integrated firms has been most pronounced in regions having greatest expansion of egg production—the West, South Atlantic, and South Central.

Under contract production, processors supply production inputs to growers while maintaining ownership of inputs. Once a major influence in the South Atlantic and South Central regions, contract production has declined in relative importance since the mid-1960's with the emergence of large owner-integrated operations.

Egg cooperatives haven't developed at the same pace as owner-integrated operations or contract production. During the mid-1950's, cooperatives were relatively more important in the North Atlantic and Western regions. (20)

## Cities Siphon Boxcars Needed for Farm Products

When agricultural products, especially grain, are ready to go to market, there's often a shortage of available boxcars.

This happens especially in October and November and particularly in the Midwest.

An ERS study indicates this will probably continue through the years immediately ahead.

The shortage appears to come about principally through an unequal distribution of boxcars through the country. But a decrease in available boxcars, from 661,000 in 1955 to

429,000 in 1967, adds to the present problem.

Metropolitan areas usually have more empty cars available to shippers than rural areas. This imbalance occurs because rural areas require more cars for shipping raw materials than are received with finished goods.

Thus, rural areas frequently don't have enough cars available during peak seasons of production and marketing. This is particularly true during peak harvest seasons occurring during periods of high economic activity.

In an attempt to ease the boxcar shortage, the Interstate Commerce Commission (ICC) last year established an incentive per diem system to (1) speed up return of cars to the owner and (2) provide a fund for purchase of more boxcars. Under this system, users of general purpose boxcars must pay an additional daily charge from September through February—the months when the boxcar shortage is most acute. This money is put into a fund to be drawn upon by boxcar owners to buy more cars.

Per diem rental rates were originally established so that the railroad using the car would pay the owner for its use. (About 65 percent of the life of a boxcar is spent on other-than-home tracks.)

When per diem rates are quite low compared to ownership costs—as they probably were from 1902 to 1964—railroads are not inclined to buy new cars but to use those of others.

The ICC's 1970 incentive per diem order may also partially offset the shortcomings of a time and mileage car rental system effective since 1969. It was intended to insure owners more equitable payment for use of their cars.

The time and mileage charges include costs of repair, maintenance, and depreciation. A car over 30 years old costing \$5,000–\$7,000, for example, would have per diem charges of 73 cents and 1.87 cents per mile. But a car under 6 years old

with an original value of \$39,000 to \$41,000 would have charges of \$10.22 per day and 4.6 cents per mile. The net effect of the system appears likely to be a delay of the return of older, lower valued cars to the owning railroads.

The ICC has the power to issue service orders to move empty cars during periods of shortages and to change demurrage charges. These and other legal measures will probably be necessary for several years to come to help in the car shortage.

There are, however, several other developments that may reduce the demand for railcars, including competition from other means of transportation. Barges, for instance, moved almost 12 million tons of feed grains in 1968 compared to 4 million tons in 1961. Barges also move large tonnages of other commodities such as wheat and soybeans.

Special service cars are also expected to reduce the long-run demand for general purpose boxcars. These cars are larger than general service boxcars, and are adapted to hauling bulky items such as major appliances. Special service cars increased from 9 percent of the total Class I railroad car fleet in 1955 to over 25 percent of the fleet in 1967.

Too, railroads' use of cars is expected to become more efficient with more centralized traffic control and stepped up use of computerized systems to keep track of cars. (18)

## DDT Phaseout Began In Early Sixties

Domestic use of the insecticide DDT dropped more than 60 percent in the 1959–69 period, according to ERS. The decline reflects increasing insect resistance to DDT, the growing availability of alternative pesticides, and the concern about DDT's effect on the environment.

In recent years, certain uses of DDT were cancelled by the U.S. Department of Agriculture and other restrictions were placed on its use by several State Governments. In November 1969, USDA announced the intent to cancel all uses of DDT for



(Continued from page 3)

ceipts could run about \$2 billion above 1970's \$19.6 billion.

The recent economic measures along with larger supplies and lower prices for feed, should help farmers hold down farm production expenses. Interest rates have declined somewhat in recent weeks reflecting a renewed confidence in the fight against inflation. A reduction in Federal spending could also hold many taxes in place.

**The proposed legislation to permit a tax credit on purchases of most new machinery and equipment if adopted would also benefit farmers.** Such expenditures totaled around \$4.4 billion last year, although all such expenditures would not be fully eligible. The proposed 10-percent credit would apply only to equipment with a relatively "long life." The tax credit has about the same effect on the cost of an item as a like reduction in the price.

Composite farm wage rates—a weighted average of all time rates—averaged on July 1, 1971 some 4 percent above a year earlier. This is a much smaller gain than for nonfarm labor. Prior to the price-wage freeze,

many workers in trades and skills received raises of 10 percent or more. But high rates of unemployment throughout the country have apparently limited off-farm opportunities. A substantial recovery in the economy could reverse this trend, making farm labor harder to get.

**The large feed grain crops expected this year, while resulting in lower prices to feed grain producers, will provide some benefits to farmers.** Expensive feed, up because of last year's corn blight and drought, was a large item cutting into livestock profits in the first half of this year. Farmers last spring planted 8 percent more acres to feed grains. If the weather cooperates and the blight is light, the corn crop alone will total around 5.3 billion bushels. Wheat output is estimated about 1.6 billion bushels, 16 percent above a year ago.

With larger cash receipts and a slowing in production costs, net farm income in the second half of this year will average well above the depressed levels of a year earlier. Strong demand will play a large part in maintaining prices despite larger marketings.

protection of crops, livestock, forests, and public health unless continued uses were justified by documentation. In January 1971, the Environmental Protection Agency issued notices of cancellation on all remaining uses of DDT in the U.S. The cancellations were subject to appeal and review. Manufacturers could continue interstate shipments during this period.

Even before these actions, however, DDT's use was gradually falling off. Researchers discovered other effective insecticides for most of the pests, as well as nonchemical means of control. From an alltime high of 79 million pounds in 1959, domestic use of DDT declined steadily during the 1960's. In 1969, it reached a 20-year low of 30 million pounds.

Just how much DDT farmers used in 1969 has not been determined. According to ERS pesticide use surveys,

farm use of DDT in 1966 was 27 million pounds, down from 32 million in 1964. Farm use in those years accounted for somewhat more than half the total DDT consumption in the U.S. Nearly all of this was applied to crops, primarily cotton.

DDT production climbed in the early 1960's to a peak of 188 million pounds in the 1963 crop year, and generally trended down thereafter. The 1969 output was 123 million. By early 1971, only one company in the U.S. was producing the insecticide.

In recent years, around 70 percent of DDT production has been exported. Exports went from a high of 114 million pounds in 1963 to 82 million in '69. Much of the exports are bought by the Agency for International Development and the United Nations, mainly for malaria eradication in India and other countries on the continent of Asia. (6)

## Make Room



## For Mushrooms

The 1970/71 mushroom season turned out to be the busiest in the industry's history. Total production for the marketing year that closed on June 30 was 207 million pounds, up from 194 million in 1969/70. Pennsylvania produced over 60 percent.

Stepped-up production was matched by strong retail demand that pushed prices sharply above year-earlier levels. The crop brought growers nearly \$90 million—compared with \$73 million in 1969/70. At seasons' end, the average price per pound reached 43 cents.

The lively demand for fresh mushrooms is also mirrored by the large volume of air freight shipments from Philadelphia. During January-May, shipments of the fragile fungi totaled nearly 500,000 pounds, capping last year's tally for the same period by close to 70 percent.

Mushrooms for processing commanded a big market through season's end. Pa. canners were paying record high prices—about 41 cents for bed-run pulled mushrooms with roots, and 45 cents per pound for the clean-cut product.

The 1971/72 marketing season will get under way in late October or early November. Canners are expected to bid actively to replenish drained supplies.

Anticipating a continued heavy demand, producers in Pa.'s Kennett Square area have built additional growing houses and refurbished some old ones. The growers expect to fill 7 percent more beds during 1971/72. (21)



*For the shopper who's interested in how much he spends for packaging in his grocery food bill, a new study by ERS gives him a detailed breakdown of the cost.*

Packaging materials take about a nine-cent bite out of every retail dollar spent on farm foods.

Last year, out of the total \$101.6 billion consumers paid for farm foods, \$8.8 billion was for packaging materials.

These figures come from research by ERS into the costs of packaging materials.

Food packaging has grown into a multibillion dollar industry since those days before frozen foods, before overnight coast-to-coast deliveries, before agriculture was so distant from major consuming areas.

Today, almost half of all containers and packaging materials made in the U.S. are for food.

Of last year's \$68.5 billion marketing bill (total cost of transporting, processing, and distributing farm foods), packaging material costs accounted for 13.3 percent—second only to labor costs. To keep packaging material costs comparable to other costs in the marketing bill, the study excludes imports, seafoods, alcoholic beverages, and military foods.

Packaging material costs have climbed at a faster rate than either the marketing bill or the consumers' bill since 1958. They've averaged a 5.2-percent annual increase, while marketing costs climbed 4.6 percent, and consumer spending, 4.3 percent.

The greatest share of the packaging bill is for paper products—42 percent, the same portion as in 1958. Paper products accounted for \$3.7 billion in food packaging last year. Three-fourths of that figure was for sanitary food containers, solid fiber and corrugated boxes, and folding paper boxes.

Metal containers—including cans, aerosols, foils, drums, barrels, pails, and steel strappings—accounted for 22 percent of the food packaging bill.

Glass and plastic containers each

## What's in the Package?



accounted for about 9 percent of the bill, followed by wooden containers and textile containers such as cotton and burlap bags, cheesecloth, and twine.

Wholesale prices of packaging materials rose only about 1 percent annually from 1958 to 1969. But in 1970, prices jumped 4 percent. Paper bag and shipping sack prices rose far more: 8½ and 8 percent, respectively.

In 1958–69, the increase in total container and packaging value was due to greater quantities used. In 1970, however, most of the increase in value of shipments was due to price increases. Metal and glass container costs are expected to rise further in the next few years. Labor contracts recently signed in both industries provide for wage and fringe benefit increases. Productivity is not expected to gain sufficiently to offset higher per unit labor costs and higher prices.

Among the various packaging products, paper is the most popular not only because of its versatility but because of its relatively low cost. The industry has also done considerable research to find new uses for paper, and one example is the development of moisture resistant fibreboard boxes, now widely used for packaging fresh vegetables, meats, and poultry products.

Metal cans account for more than four-fifths of the metal containers and component materials used. Use of metal containers in packaging declined from 24 percent to 22 percent of the total food packaging bill from 1958 to 1970, reflecting in part higher costs of raw materials such as steel and tin.

Use of glass containers—third in importance among packaging materials—increased from 8 percent to 9 percent from 1958 to 1970. Foods canned in glass make up almost three-fourths of the total, and soft drink bottles make up most of the remainder. Use of nonreturnable soft drink bottles has increased to where they now account for 80 percent of the new bottles manufactured for soft drinks.



What's new in packaging?

One trend is in more ready-to-serve foods.

The Agriculture Research Service, for instance, is working on grapefruit halves already segmented in a disposable bowl. While this product is primarily for use by hospitals, hotels, and restaurants, it will later be available for retail stores. It's being developed in an effort to get fresh grapefruit to persons in institutions and to others who would not normally eat grapefruit because of time costs in preparation.

Polyethylene bags for fluid milk have caught on, especially in Canada where one-third of all fluid milk is sold in film bags.

More and more meat is packaged at central warehouses and delivered to the retail stores ready for the consumer.

More foods will be shipped by plane in the future, allowing more mature fruit to be shipped. Lighter weight packaging is helping to make this possible. (22)

## Pumpkin Sales Lit By Jack-o-lanterns

As Halloween approaches, so does the top sales period for fresh market pumpkins. Nearly 80 percent of the year's supply is sold in October, and nearly all goes for jack-o-lanterns.

Demand for canned pumpkin also hits its peak in the last part of the year. About 85 percent of the season's shipment of pumpkin and squash (they're not separated in official statistics) is sent to stores from July through November.

Total pumpkin and squash canned last year amounted to nearly 2.9 million cases, and the total frozen products came to more than 27 million pounds. The annual fresh market supply of pumpkins is estimated by trade sources to be about 46 million pounds.

Illinois leads all States in number of acres planted in pumpkins, with more than twice the acreage of the No. 2 pumpkin State of California. Other important producers include

New Jersey, New York, Ohio, Michigan, Delaware, Pennsylvania, Indiana, and Minnesota.

The Midwest is by far the leading processor of canned pumpkin and squash, and accounted for more than 2 million cases last year. (23)

### *Hawaiian Hit*

The macadamia nut—a native of Australia—has moved to Hawaii, where it's flourishing as a major commercial crop.

Seeds of the macadamia, a subtropical evergreen tree, were first brought to Hawaii in the late 1800's. It was then regarded as an ornamental plant, and not till 1922 was the macadamia grown on a commercial scale for the nut itself.

Production mounted steadily over the years, but the real spurt came in the postwar period. From around 300 tons in 1946, production had reached more than 5,000 tons by 1969. Shipments to the mainland since 1960 increased more than fivefold to nearly \$3 million.

The macadamia was named for Dr. John Macadam, a Scottish chemist who lived in Australia in the mid-1800's (not to be confused with John MacAdam, the Scottish engineer who gave his name to the paving process). Macadam, it's said, was the first to call attention to the macadamia nut for its food value.

Today the spherical, white nut is considered one of the world's finest for use in confectionary products. Prized for its smooth texture and flavor, it's also a good source of calcium, phosphorus, iron, and vitamin B-1.

Most of Hawaii's macadamias are cooked, vacuum packed and shipped to speciality shops and fancy food stores on the U.S. mainland. Besides for out-of-hand eating, the nut can be used with salads, fish specialties, and vegetable dishes.

Though Hawaii now has a monopoly in world production of the macadamia nut, competition is developing. In California, where the macadamia tree has long been used for landscaping, there's considerable interest in the macadamia as a new orchard crop in the avocado districts. South Africa and Rhodesia are also looking into the possibilities of commercial production. (24)

## Oranges Blossom As No. 1 Citrus Fruit

Oranges topped all other citrus fruits in popularity in U.S. households, according to a nationwide USDA survey.

About 9 in 10 homemakers interviewed reported using fresh oranges and orange juice in the year preceding the study.

Orange juice appears to be one of the Nation's favorite beverages. More than 70 percent of the homemakers interviewed said they served it at least once a week.

Of the three forms of orange juice that homemakers were asked to rate—fresh home squeezed, frozen concentrate, and canned—the fresh was the favorite on taste, flavor, and nutritional value. Frozen concentrate scored best on cost and did well in most other categories. Canned juice was considered convenient to use by homemakers, though they rated it low on taste.

Homemakers were asked to select from various alternative characteristics those which best described their concept of the ideal orange juice.

Although homemakers showed a slight preference for unsweetened over sweetened orange juice and for a smooth product over one that contained some orange pieces or pulp, the findings indicated that the market for this product is highly diversified and can best be met by a variety of products. (25)

## 30-to 60-Year-Olds Perk Up Coffee Sales

Coffee hits its peak of popularity with Americans in their forties.

It's then that, on the average, they drink nearly 4 cups a day (or, to the last drop, 3.93).

From the time Americans turn 30 till they're 60, they drink better than 3½ cups a day.

Coffee drinking has gone down over recent years for all age groups, however. Daily per capita consumption was 2.6 cups last year, down about 3 percent from 1969. (26)



# NIGERIA



*With little help from machines, Nigerian farmers have made their nation a leading agricultural exporter while providing most of the food for their countrymen.*

With the Nigeria-Biafra civil war now a page in history, the barometers of the Nigerian economy indicate a return to steady growth in agriculture and other sectors, according to a study recently carried out by ERS.

Gross National Product reached \$4.8 billion in 1969—a 17-percent jump from the 1967 figure. Of Africa's 42 independent nations, Nigeria's GNP was third highest in '69.

The burden for development of the Nigerian economy rests heavily on agriculture, but other industries are more and more sharing in this burden.

The petroleum industry in partic-

ular has grown spectacularly since January 1970 and the end of the 2½-year Nigeria-Biafra conflict. Nigeria now ranks among the top 10 petroleum producers. Petroleum exports, depressed to only \$101 million in 1968, were \$381 million in 1969, and rose to \$731 million in 1970 to rank as Nigeria's most important exchange earner.

In 1969, total exports by Nigeria were valued at \$895 million, of which agriculture's share was \$426 million. The U.S. was Nigeria's sixth best customer that year, with imports of \$25 million (mostly cocoa products and rubber).

The variety and volume of Nigeria's exports are impressive. A third bigger than our State of Texas, Nigeria is the world's largest producer of palm oil, African yams, cowpeas and kola-

nuts; second in cocoa; third in peanuts; and sixth in rubber.

It's also the world's leading peanut exporter, and ranks high on the list of exporters of cocoa and cocoa products, palm kernels and derivatives, and rubber.

Equally notable is the short list, and relatively low value, of Nigeria's imports of agricultural goods.

Nigerian farm imports were \$64 million in 1969—not a large amount considering this is Africa's most populous country with over 56 million people, or a fifth of Africa's black population. Three commodity groups—wheat, milk and cream, and sugar—make up over two-thirds of total agricultural imports. The U.S. is Nigeria's chief supplier of agricultural commodities, shipping \$19 million in 1969 and \$30 million in 1970.

The outlook is for continued expansion in industry and in production of Nigeria's major export crops, according to the study.

**Cocoa.** About 1-1½ million acres are planted to cocoa trees in Nigeria, and another 1 million acres have soils suitable for cocoa. Increased area, plus better care of the trees and more efficient harvesting and fermenting, should bring considerably larger production in the years ahead. The outlook is further brightened by a good demand for cocoa in world markets.

**Peanuts.** Production and exports are seen holding near recent levels, assuming world prices remain favorable to Nigerian growers.

**Oil palms.** Improved varieties set out in plantations could greatly increase production of both palm oil and palm kernels. However, rising competition from other palm oil countries—as well as from other fats and oils—could keep such proposed new plantings in Nigeria from being as profitable as hoped for.

**Rubber.** The end of the Nigeria-Biafra conflict should permit rubber production to keep expanding. More than local factors, the world price for rubber will be decisive in the outlook.

**Cotton.** Output will probably continue to grow. But exports may one day cease entirely with the expected increases in capacities of Nigerian tex-



tile factories.

Nigeria has good prospects for a prosperous and active economy. However, many problems still seek solution.

One is a shortage of workers with managerial and technical skills. Another, with more direct bearing on agriculture, is the inadequacy of transportation arteries. Many roads must be closed to all traffic for some hours after rain begins to fall. Some of the fairly new trunk roads have only one paved lane.

Electric power is still in short supply, even with the greatly increased power output from a new generating plant on the Niger River. Power cuts are common, and this often keeps agricultural processing plants from operating at their rated capacities.

Farming is relatively primitive and inefficient.

The typical Nigerian farmer cultivates 1 to 5 acres of land, using family labor, although cocoa farmers in Western State may manage as many as 30 acres. The Nigerian farmer usually does not have legal deed to his land or title to it. Land rights are often administered according to local tribal customs and Nigerian law, and are held on a family or tribal basis.

This system of land tenure discourages use of credit and investment in farm operations. The system has, on the other hand, allowed millions of Nigerians to eke a living from the land. There are no huge holdings in the hands of rich and powerful families. Private land ownership is gradually evolving, however. Some farmland can now be sold and a clear title received.

In the adoption of modern farm technology, Nigeria lags behind many other undeveloped countries.

For example, the huge Nigerian peanut crop of over a million tons is grown almost entirely by hand. Land preparation, planting, cultivating, and harvesting are—with few exceptions—all done without work animals or tractors.

The ERS study says that the peanut industry could be readily mechanized. But this would mean unemployment for hundreds of thousands of Nigerian workers.

Very little land is irrigated, though this could change now that the large hydroelectric Kainji Dam has been completed. Rice and sugar are among the crops that could benefit from this new water source.

For all practical purposes, Nigeria

**In the livestock kingdom . . .** goats, numbering over 20 million, are the most plentiful of all livestock in Nigeria, not counting poultry. They are found around every village. To the untrained eye, Nigeria's goats are indistinguishable from the hair sheep. (As a rule of thumb, those with tails held high are goats, those with tails down are sheep.) Both the sheep and the goats are raised for their meat and skins. Better quality goat skins, from the red Sokoto, are tanned into Morocco leather for export.

Though there are over 60 million chickens, these are local types that scavenge for their food in the villages. The chickens yield little meat. The hens lay small eggs and few of them.

However, a growing number of Nigerian chicken farmers keep imported breeds in houses, under careful feeding and management programs. But a serious threat to continued expansion of this industry is Newcastle disease. Omnipresent among chickens in the villages, Newcastle sometimes wipes out whole flocks before news of the outbreak can reach government veterinarians.

The predominant cattle raising system is the one practiced by the Fulani, a seminomadic people living all across Africa's savanna zone from Senegal to Sudan. The Fulani move their herds with the seasons, in search of water and forage. The tribesmen have agreements with settled farmers to graze their cattle on millet and sorghum stalks in exchange for the manure left by the herds.

does not use commercial fertilizers. Applications of plant nutrients to field crops, by unofficial estimates, average less than 1 pound per acre.

Disease, insect pests, and rats often ravage the crops in the field and in storage facilities. Birds also cause heavy

losses of small grains in some parts of the country.

So far, the control measures undertaken have been almost exclusively against plant diseases of cocoa and coffee.

Nigeria has made much progress in selecting and breeding new and improved plant varieties adapted to local conditions. Use of these varieties is promoted through distribution of seeds and seedlings at subsidized prices to growers. In the Western State alone, an average of 10 million improved Amazon cocoa seedlings have been distributed each year since 1960.

Except for cocoa and cotton, however, seed multiplication and distribution systems have not been developed on a sufficient scale to encourage widespread usage. Generally the farmer gets his seed from the previous year's crop, so that genetically, the crop is gradually degraded.

Progress has been slow in improving animal breeding and livestock production practices, with the possible exception of hog raising. The commercial hog producers raise imported British breeds. But most hogs in Nigeria belong to the long-nosed, local black breed, and scavenge for a living.

Agricultural research is getting increasing attention. The Federal Department of Agricultural Research maintains several experiment stations that do investigations in staple crops. There are also such research organizations as the Cocoa Research Institute of Nigeria, the Nigerian Institute for Oil Palm Research, the Institute for Agricultural Research, and the International Institute of Tropical Agriculture (IITA) opened in 1970. In addition, Nigeria has colleges of agriculture at four of its five universities.

A major recipient of U.S. economic and technical assistance, Nigeria got grants and loans totaling \$288 million from 1946 to 1969. A substantial portion of this aid has gone to agriculture. Other important donors of bilateral aid include the United Kingdom, West Germany, and Italy. (27)



## World Wheat Output Seen Recovering

World wheat production, after 2 years of going downhill, may increase moderately this year. Most of the gain will be in the U.S., Canada, and Europe.

North America's wheat crop is up 12 percent to 2.1 billion bushels. U.S. production by recent estimates, rose 16 percent to 1.6 billion bushels. The percentage gain in Canada was even greater—53 percent to 507 million bushels—by the August forecast.

Western Europe's harvest is expected to swell about 5-10 percent, maybe to exceed the 1968 record. In Eastern Europe, the anticipated increase is over 10 percent from last year's bad crop. The USSR also expects another good crop.

Preliminary estimates for wheat production in Australia and Argentina indicate a recovery from the low levels of a year ago.

The huge stocks of major exporters at the start of 1970/71 season have since been drawn down. Nevertheless, international prices are seen averaging below those of a year earlier. Key factors in the weaker prices will be the larger world production and a smaller import demand. Also, demand for feed in the U.S. will be off if output of feed grains is as large as now seems likely. (30)

## U.S. Food Suppliers Face Challenges in Denmark

In some ways it's still the fairy tale country of the tourist brochure and Hans Christian Andersen's stories. The Denmark of today is also a bustling commercial center.

This small country—just twice the size of Massachusetts—has only 5 million people. Yet it ranks fifth in per capita income (behind the U.S., Canada, Sweden, and Switzerland) and is a major world exporter of

both agricultural and industrial goods.

U.S. food and farm products worth \$293 million went to Denmark in 1969. The U.S. supplied roughly a quarter of the market for agricultural commodities.

ERS economists foresee a more than one-fifth expansion in Denmark's retail food market this decade. This growth, however, does not assure the U.S. an expanding market share.

A continuing revolution in Danish food marketing will require that exporters keep in constant touch with the market conditions. Rising family incomes and removal, in 1970 and 1971, of major legal restraints on large-scale retailing are expected to contribute to important changes in Denmark's food marketing system.

Denmark now has about 28,000 foodstores, compared with over 38,000 in 1958. Most of them are small, and these are disappearing at the rate of some 30 a week.

By 1980, Denmark will have only 13,000 foodstores of all types; most will be self-service ones. The major share of retail food sales will be made by supermarkets, even though they may account for less than 13 percent of all Danish foodstores in 1980. Further, it's estimated that 75-80 percent of all retail foods sales will be made by 10-12 big enterprises—cooperative and corporate food chains, department-store chains, retailer cooperatives, and voluntary chains.

The U.S. food manufacturers with the best sales records on American processed foods in Denmark are firms that put major emphasis on direct marketing. They have their own Danish sales forces. Or, they contract with a Danish manufacturer of complementary products to utilize his professional sales staff.

Processed foods, incidentally, appear to have the most promising potential for increased sales of U.S. farm products to Denmark. Proc-

essed food sales are rising about 5-7 percent annually, or three times the growth rate in total food expenditures of 1.5 percent a year. Sales of some convenience items are increasing 10-30 percent. They include frozen foods, pet foods, prepared main dishes, baby foods, canned and dry soups, and snack foods. (28)

## Farms in West Germany Average Under 24 Acres

Agriculture in West Germany is characterized by many small farms.

And therein lies a major problem in that country's agriculture—many of the farms are too small for efficient operation. Consequently production costs are high and income low. The average size of the country's 1.3 million farms is 9.6 hectares—just under 24 acres. Larger farms would enable farmers to make use of economies of scale that lower unit costs.

Although more than half its land and nearly 10 percent of its labor force is in agriculture, West Germany is able to produce only three-fourths of its food and other agricultural requirements. Consequently, trade is an important aspect of West Germany's agricultural economy.

West Germany is the world's third leading importer of agricultural commodities, with farm imports totaling more than \$5.5 billion in 1969—more than five times the value of agricultural exports. Fruits and vegetables are by far the major agricultural import. They accounted for 31 percent of total agricultural imports in 1969.

Family workers make up nearly all of the farm labor force—91 percent in 1967/68. Of the total, more than half—54 percent—are women.

The primary source of income for West German farmers is livestock production, which accounted for 78 percent of total farm receipts in 1968/69. The most important single source was dairying. (29).



# Recent Publications

**AGRICULTURE IN THE EUROPEAN COMMUNITY AND THE UNITED STATES 1958-68.** William P. Roenigk, Foreign Regional Analysis Division. ERS For. 307.

This statistical study compares the structure, resource allocation, and performance of agriculture in the U.S. and the European Community.

**IMPACT OF CITY-COUNTY CONSOLIDATION OF THE RURAL-URBAN FRINGE: NASHVILLE-DAVIDSON COUNTY, TENN.** Robert E. McArthur, University of Mississippi, cooperating with Economic Development Division. AER 206.

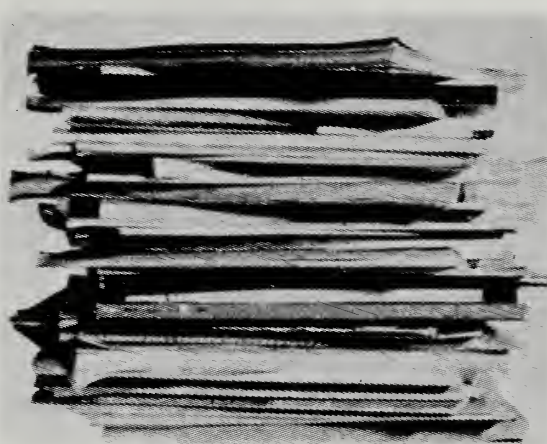
This report analyzes the effect of consolidation of city and county governments in Nashville, Tenn., on local public finance and the availability of public services in the rural areas of the county. Comparisons were made between governmental costs and functions before, and 3 years after, the metropolitan district was formed.

**MAJOR STATISTICAL SERIES OF THE U.S. DEPARTMENT OF AGRICULTURE: HOW THEY ARE CONSTRUCTED AND USED: VOLUME 8 CROP AND LIVESTOCK ESTIMATES.** Bruce W. Kelly, William C. Hinson, and Gordon G. Butler, Farm Production Economics Division. Agricultural Handbook No. 365.

This handbook is one of several that serves to update *Agricultural Handbook No. 118, Major Statistical Series of the U.S. Department of Agriculture*, published in 10 volumes during 1957-60. It incorporates a number of changes in methods and coverage over the past 10 years.

**THE AGRICULTURAL SITUATION IN THE WESTERN HEMISPHERE: REVIEW OF 1970 AND OUTLOOK FOR 1971.** William R. Gasser, Foreign Regional Analysis Division. ERS For. 312.

This annual review supplements



*The publications listed here are issued by the Economic Research Service and cooperatively by the State universities and colleges. Unless otherwise noted, reports listed here and under Sources are published by ERS. Single copies are available free from The Farm Index, OMS, U.S. Department of Agriculture, Washington, D.C. 20250. State publications (descriptions below include name of experiment station or university after title) may be obtained only by writing to the issuing agencies of the respective States.*

the *World Agricultural Situation*, WAS-1. The report provides the early-season outlook for 1971 production and trade of Canada and 23 Latin American countries.

**OUTDOOR RECREATION: PUBLICATIONS AND ARTICLES BY THE ECONOMIC RESEARCH SERVICE, 1962-70.** Hugh A. Johnson, Natural Resource Economics Division. ERS 442.

A compilation of articles, reports, and speeches on outdoor recreation in the United States. Materials covered are by personnel of the Economic Research Service, USDA, and were published separately or in proceedings, journals, congressional documents, and other forms during 1962-70. The material discusses outdoor recreation from the point of view of economics and covers a wide range of ERS resource-management concerns.

**SOYBEANS: ACREAGE RESPONSE TO PRICE AND FARM PROGRAM CHANGES.** W. Herbert Brown, Farm Production Economics Division, ERS 473.

Soybean acreage has steadily expanded from about 1 million acres harvested for beans in the early 1930's to over 42 million acres in 1970. Since demand for soybeans expanded more or less simultaneously with supply, soybean prices have not been unduly depressed, nor have carryovers been excessive.

**SUPPLEMENT FOR 1970 TO WOOL STATISTICS AND RELATED DATA, 1930-69.** Mildred V. Jones and Larry B. Clayton, Economic and Statistical Analysis Division. Sup. for 1970 Stat. Bul. 455.

This publication is the first annual supplement to *Wool Statistics and Related Data*, 1930-1969. The latter bulletin provides statistics on production, consumption, foreign trade, and prices of wool, mohair, and similar hair fibers. Selected data on cotton and man-made fibers are also given.

**TAXES PAID BY FIRMS MARKETING FARM FOOD PRODUCTS.** William T. Wesson and Henry L. Wong, Marketing Economics Division. AER 50.

This report provides the results of a study to measure the amount of Federal income and business taxes paid by food processors, wholesalers, retailers, and eating and drinking places in the marketing of domestic farm food products. Such firms paid about \$3.5 billion in taxes for 1967.

**THE LOOK OF OUR LAND. AN AIR-PHOTO ATLAS OF THE RURAL UNITED STATES: THE MOUNTAINS AND DESERTS.** Simon Baker, and Henry W. Dill, Jr., Natural Resource Economics Division. Agricultural Handbook 409.

Airphotos illustrate land use patterns and terrain in two land resource regions in the Western United States. Portions of small-



scale airphoto index sheets and a stereopair of airphotos accompany the description of each area that is reproduced from USDA Handbook 296, *Land Resource Regions and Major Land Resource Areas of the United States*.

**THE AGRICULTURAL SITUATION IN WESTERN EUROPE.** Foreign Regional Analysis Division. ERS For. 311.

This study focuses on major agricultural and economic developments of concern to U.S. agricultural interests. The information provides an analytical comment for short run policy decisions and furnishes information on current developments in the agri-

culture and trade of Western Europe—the major commercial market for U.S. agricultural exports.

**DDT USED IN FARM PRODUCTION.**

Theodore Eichers, Robert Jenkins, and Austin Fox, Farm Production Economics Division. AER 158.

This report summarizes information on the production and farm use of DDT. It is based primarily on Economic Research Service surveys conducted in 1964 and 1966.

**COTTON GIN OPERATING COSTS IN WEST TEXAS 1969-70.** Dale L. Shaw and Charles A. Wilmot, Marketing Economics Division. MRR 934.

The objectives of the study are to

determine the current costs of ginning on the High Plains of West Texas and observe trends over the past 5 years.

**FOOD CONSUMPTION IN BRAZIL: FAMILY BUDGET SURVEYS IN THE EARLY 1960's.** Published by the Getulio Vargas Foundation, Brazilian Institute of Economics Center for Agricultural Studies in cooperation with the USDA.

This study provides a substantially accurate picture of food consumption patterns throughout Brazil. The report assesses Brazil's nutritional situation regarding calorie, protein, and fat consumption at different income levels of the population.

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# Economic Trends

Item	Unit or Base Period	1967	Year	1970 July	1970 May	1971 June	1971 July
<b>Prices:</b>							
Prices received by farmers	1967=100	—	110	112	113	113	113
Crops	1967=100	—	100	103	111	114	111
Livestock and products	1967=100	—	118	119	114	113	114
Prices paid, interest, taxes and wage rates	1967=100	—	114	114	120	120	120
Family living items	1967=100	—	114	114	118	119	119
Production items	1967=100	—	110	109	115	116	116
Ratio <sup>1</sup>	1967=100	—	96	98	94	94	94
Wholesale prices, all commodities	1967=100	—	110.4	110.9	113.8	114.3	114.6
Industrial commodities	1967=100	—	110.0	110.0	113.7	113.9	114.5
Farm products	1967=100	—	111.0	113.4	114.0	116.0	113.4
Processed foods and feeds	1967=100	—	112.0	113.3	114.5	114.9	116.0
Consumer price index, all items	1967=100	—	116.3	116.7	120.8	121.5	121.8
Food	1967=100	—	114.9	115.8	118.2	119.2	119.8
<b>Farm Food Market Basket: <sup>2</sup></b>							
Retail cost	Dollars	1,080	1,225	1,235	1,241	1,251	1,263
Farm value	Dollars	414	480	497	474	479	484
Farm-retail spread	Dollars	666	745	738	767	772	779
Farmers' share of retail cost	Percent	38	39	40	38	38	38
<b>Farm Income: <sup>3</sup></b>							
Volume of farm marketings	1967	100	104	100	81	91	100
Cash receipts from farm marketings	Million dollars	42,693	49,231	3,948	3,428	3,744	4,000
Crops	Million dollars	18,434	19,636	1,500	952	1,246	1,600
Livestock and products	Million dollars	24,259	29,595	2,448	2,476	2,498	2,400
Realized gross income <sup>4</sup>	Billion dollars	49.0	56.6	—	—	57.6	—
Farm production expenses <sup>4</sup>	Billion dollars	34.8	40.9	—	—	42.8	—
Realized net income <sup>4</sup>	Billion dollars	14.2	15.7	—	—	14.8	—
<b>Agricultural Trade:</b>							
Agricultural exports	Million dollars	—	7,174	569	625	607	579
Agricultural imports	Million dollars	—	5,667	462	478	530	489
<b>Land Values:</b>							
Average value per acre	1967 = 100	—	<sup>6</sup> 118	<sup>7</sup> 117	—	—	<sup>8</sup> 121
Total value of farm real estate	Billion dollars	—	<sup>6</sup> 207.3	<sup>7</sup> 208.2	—	—	<sup>8</sup> 214.0
<b>Gross National Product: <sup>4</sup></b>							
Consumption	Billion dollars	793.9	974.1	—	—	1,041.3	—
Investment	Billion dollars	492.1	615.8	—	—	660.9	—
Government expenditures	Billion dollars	116.6	135.3	—	—	152.4	—
Net exports	Billion dollars	180.1	219.4	—	—	230.2	—
<b>Income and Spending: <sup>5</sup></b>							
Personal income, annual rate	Billion dollars	629.3	803.6	805.3	850.0	870.1	859.1
Total retail sales, monthly rate	Million dollars	26,151	30,381	30,729	32,692	33,110	—
Retail sales of food group, monthly rate	Million dollars	5,759	6,789	6,751	7,212	7,125	—
<b>Employment and Wages: <sup>5</sup></b>							
Total civilian employment	Millions	74.4	78.6	78.6	79.0	78.4	78.9
Agricultural	Millions	3.8	3.5	3.5	3.5	3.3	3.4
Rate of unemployment	Percent	3.8	4.9	5.0	6.2	5.6	5.8
Workweek in manufacturing	Hours	40.6	39.8	39.9	40.0	40.2	39.7
Hourly earnings in manufacturing, unadjusted	Dollars	2.83	3.36	3.37	3.56	3.57	3.56
<b>Industrial Production: <sup>5</sup></b>							
	1967 = 100	—	107	108	107	107	106
<b>Manufacturers' Shipments and Inventories: <sup>5</sup></b>							
Total shipments, monthly rate	Million dollars	45,712	55,554	57,025	59,309	60,149	—
Total inventories, book value end of month	Million dollars	82,825	99,614	98,260	99,602	99,456	—
Total new orders, monthly rate	Million dollars	45,928	55,009	57,111	58,013	57,813	—

<sup>1</sup> Ratio of index of prices received by farmers to index of prices paid, interest, taxes, and farm wage rates. <sup>2</sup> Average annual quantities of farm food products purchased by urban wage-earner and clerical worker households (including those of single workers living alone) in 1959-61—estimated monthly. <sup>3</sup> Annual and quarterly data are on 50-State basis. <sup>4</sup> Annual rates seasonally adjusted second quarter. <sup>5</sup> Seasonally adjusted. <sup>6</sup> As of November 1, 1970. <sup>7</sup> As of March 1, 1970

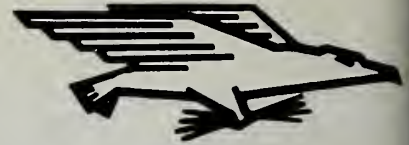
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